Industry Snapshots

- The aerospace industry comprises companies producing aircraft, guided missiles, space vehicles, aircraft engines, propulsion units, and related parts. Aircraft overhaul, rebuilding, and parts are also included. (U.S. Bureau of Labor Statistics)
- Other sectors of the economy depend on aerospace businesses and related disciplines for technical skills and technologies that are critical elements of our security infrastructure and improve America's position in the global marketplace. (President's Commission on the Future of the United States Aerospace Industry)
- Aerospace Industries Association President and CEO John Douglass stated that "with $161 billion in sales…U.S. aerospace is a strategic industry in the nation's economy, homeland security, and national defense." (Douglass, 2004)

High Growth INDUSTRY PROFILE

Workforce Issues

Aging Workforce

- Preparing for the demographic
- Addressing the loss of institutional memory, experience and intellectual capital
- Protecting the skills base, including improving the basic employability skills of entry level workers

Loss of Technical Talent

- Recruiting youth and diverse, non-traditional labor pools
- Reducing turnover and improving retention
- Improving the public image of the industry in order to retain talent and generate interest in aerospace careers
- Improving high tech skills

Skill Sets

(Sources: U.S. Bureau of Labor Statistics, 2004-05 Career Guide to Industries and 2004-05 Occupational Outlook Handbook)

- Employers need well-informed, knowledgeable employees who can keep up with the rapid technological advancements in aerospace manufacturing. The industry provides substantial support for the education and training of its workers. Firms provide on-site, job-related training to upgrade the skills of technicians, production workers, and engineers. Classes teaching computer skills and blueprint reading are common. Some firms reimburse employees for educational expenses at colleges and universities, emphasizing 4-year degrees and postgraduate studies.
- To enter some of the more highly skilled production occupations, workers must go through a formal apprenticeship. Machinists and electricians complete apprenticeships that can last up to 4 years. Apprenticeships usually include classroom instruction and shop training.
- Although it may be possible to qualify for certain engineering technician jobs without formal training, most employers prefer to hire someone with at least a 2-year Associate degree in engineering technology. Training is available at technical institutes, community colleges, extension divisions of colleges and universities, and public and private vocational-technical schools, and in the Armed Forces.
- Because many engineering technicians assist in design work, creativity is desirable. Because these workers often are part of a team of engineers and other technicians, good communication skills and the ability to work well with others also are important.
- The National Institute for Certification in Engineering Technologies (NICET) has established a voluntary certification program for engineering technicians. Certification is available at various levels, each level combining a written examination in 1 of about 30 specialties with a certain amount of job-related experience, a supervisory evaluation, and a recommendation.

ETA in Action

The U.S. Department of Labor (DOL) has sought to understand and address the critical workforce needs of the aerospace industry. DOL held forums with employers, representatives from industry associations, and others associated with the aerospace industry to learn about their hiring and training needs and potential solutions to those challenges. DOL has taken into account the key challenges identified by the President's Commission on the Future of the U.S. Aerospace Industry, including the aging aerospace workforce and a loss of technical talent. DOL's Employment and Training Administration is supporting comprehensive business, education, and workforce development partnerships that have developed innovative approaches that address the workforce needs of business while also effectively helping workers find good jobs with good wages and promising career pathways in the aerospace industry.

DOL has made a series of investment totaling approximately $7 million to address the workforce needs of the aerospace industry. The Department's efforts complement the workforce recommendations of the President's Commission on the Future of the United States Aerospace Industry.

These innovative approaches address the following workforce needs of business while also effectively helping workers find good jobs with good wages and promising career pathways in the aerospace industry:

- expanding the pipeline of youth;
- helping alternative labor pools gain industry-defined skills and competencies;
- developing alternative training strategies;
- developing tools and curricula for enhancing skill sets;
- enhancing the capacity of educational institutions;
- developing industry-defined career ladders and lattices;
- developing strategies to retain and retrain incumbent workers; and
- assisting transitioning individuals from declining industries to high growth industries.

Investments

Total Industry Investment is $6,957,633
Total Leveraged Resources are $2,724,453

Brevard Community College (FL)
Project Genesis
Grant amount: $98,560; Leveraged amount: $50,000
Brevard Community College will provide hands-on learning opportunities for students to develop technical aerospace skills and improve awareness of the skills required for aerospace careers. The initiative will provide support for the operation of launch facilities and to conduct six sub-orbital launches at historic Launch Complex 47 at Cape Canaveral.

Community Learning Center, Inc. (TX)
Aerospace Industry Training Project
Grant amount: $4,028,400 (two awards)
Leveraged amount: $1,168,080
The Community Learning Center, Inc. (CLC) will train aerospace workers for new high technology manufacturing processes. Under the continuation project, CLC will provide at least 320 dislocated workers with technical training, related supports, and subsequent employment with industry partners such as Lockheed Martin-Aero, Bell Helicopter TEXTRON, Interconnect Wiring, and Southwest Airlines.

Edmonds Community College (WA)
The Triad Initiative
Grant amount: $1,475,045; Leveraged amount: $794,064
Edmonds Community College develops advanced aerospace technician curriculum, career ladders and distance learning approaches associated with the Boeing 787 supply chain.

Florida Space Research Institute (FL)
Florida Aerospace Pilot Project
Grant amount: $355,628; Leveraged amount: $174,703
The Florida Space Research Institute will provide two aerospace mentors, covering seven counties and 25 teacher externships for technology teachers to improve hands-on knowledge and awareness of the skills required for aerospace careers in Florida.

Houston-Galveston Area Council for the Gulf Coast Workforce Board (TX)
Houston Area Aerospace Technology Skills Training
Grant amount: $1,000,000; Leveraged amount: $537,606
The Houston-Galveston Area Council for Gulf Coast Workforce Board will reduce H-1B visa worker dependency in several high technology, high skill aerospace job occupations on the Texas Gulf Coast, among the fastest growing aerospace regions nationwide.

Resources

For additional background information about the industry and details on the grants, information about employment and training opportunities, and workforce development tools for employers, educators, and workforce professionals please refer to the following: **www.doleta.gov/BRG**, **www.careervoyages.gov**, **www.careeronestop.org**, and **www.workforce3one.org**.